TO REMOVE INSTALLED NEXUS POWER PACK

Before removing the installed Nexus Power Pack, switch off the mains supply to the fitting. Unscrew/unplug the unswitched active, switched active, neutral and output (lamp and ballast) wire connections from the terminal block using a suitably sized screwdriver. Undo the test switch nut and remove LED from the grommet. Unscrew/unplug the data cable connection from the terminal block and remove sensing clip from the tube/lamp. Disconnect the battery plug from the battery pack and then unscrew the mounting screws of the Nexus Power Pack. When the fitting is reconnected to the supply, it will need time to recharge its battery before it will be capable of a full length discharge again.

Note: When sending Nexus Power Packs for repair make sure that LED, test switch and light sensor are included with the Power Pack.

TESTING PRECAUTIONS

If the fitting is to be left permanently connected to the mains supply from now on, you will need to allow 24 hours to charge its battery and then you will have to conduct a discharge test as per the requirements of AS/NZS2293.2. Presently (at the time of writing), the standard requires that new fittings operate in emergency mode for at least 2 hours during their first test. Subsequent tests are required every 6 months; fittings are then required to operate for not less than 90 minutes.
If the fitting isn't permanently connected to mains supply at this time, you are responsible for giving it the initial 2 hour test when you do connect it permanently to the mains supply. Refer to the Nexus LX User & Technical Guide for unit testing and test results.

CONSTRUCTION SITES

Continuously switching on and off the mains supply to the fittings during the installation process (due to building works or for some other reason), could cause the fittings to discharge and charge their batteries many times over a short period which may shorten the life of the battery. Thomas & Betts does not recommend such practices and may not honour any warranty on the life of the batteries or the lamp when subjected to such harsh operating conditions. The fittings are designed to be regularly discharge tested once every 6 months as per AS/NZS2293.2. In order to prevent damage to the battery, leave the unswitched active circuit turned off at the circuit breaker, until the emergency lighting is required on the site.

TROUBLE SHOOTING GUIDE

If you've installed and connected the Power Pack as per the instructions listed earlier and it doesn't work properly, use the following table as a guide to fixing the problem. Look up the type of fault in the left column and check the possible causes from the right column.

#	Fault	Possible Causes
1	LED not lit; or LED not flashing green	AC supply not connected; or AC supply turned off
2	LED is flashing green but AC lamp doesn't come on when connected to mains	Switch active supply turned off; or Missing loop from unswitched to switched active; or Lamp damaged; or Lamp not inserted properly
3	LED is flashing green but lamp doesn't come on when test switch is pressed	Lamp damaged or lamp not inserted properly; or Battery pack not connected; or Battery pack damaged; or Test switch damaged
4	LED not red after the commissioning	Battery pack not connected; or LED wire not properly inserted into the terminal block
5	Lamp is lit momentarily when test switch is pressed; or when mains fail	Battery not fully charged (allow up to 24 hours); or Battery pack damaged
6	LED is constant green	Unit self checks fail - return to manufacturer
7	Unit LED is not flashing yellow/orange under wink node command	Unit is not receiving communication signal. Check data cable wiring path and cable connections. Refer to Nexus LX User & Technical Guilde.

If the unit still doesn't work after checking these possible causes, contact Thomas & Betts Service in Australia on 1300 666 595, Monday to Friday, 8.30am to 4.30pm (AEST) and ask for help. Our trained service personnel will usually be able to take your call immediately and assist you in resolving your difficulty. Thomas & Betts is committed to providing valuable Through-Life Support for its products.

Complete Solutions in Emergency Lighting STANILITE

Doc No: 29-01119

Thomas&Betts
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Nexus LX Power Pack T5 Installation Manual

Contents

GREETINGS

Congratulations on choosing to use this Thomas & Betts product covered by our unique Through-Life Support system. This document is designed to assist you during the installation of the product, to ensure the safety of yourself and others.
The Nexus Power Pack is design to be installed quickly and easily however, **Thomas & Betts recommends that you read this document thoroughly before commencing installation.** This device has been manufactured to provide trouble free operation for many years, when treated with due care and maintained through regular and appropriate servicing.

SAFETY WARNING

In Australia and New Zealand, only licensed electricians are permitted by law to work with 240 Volts electrical installations.
Do not attempt to install or connect this product unless you are a licensed electrician.
Turn off and isolate the electrical supply before connecting this fitting to the building wires.
Do not touch the terminals of the terminal block when the light fitting is powered.
The only user serviceable part is the battery pack.
Do not tamper with the fitting or the warranty will be void.
As the installer, it is your responsibility to ensure compliance with all relevant building and safety codes, (i.e., AS3000, AS/NZS2293). Refer to the applicable standards for data and mains cabling installation procedures and requirements.

EMC WARNING

Power Pack complies with EMC regulations. We advise that if you incorporate this pack into your product (batten / fitting) you must test the complete (product / fitting) for EMC compliance.

PL LAMP WARNING

For PL lamp application it is recommended that the Power Pack be used without a LDR. The unit should be designated as a non-maintained unit. The LDR is not designed to be affixed to a PL lamp. If AC lamp monitoring is required then the LDR must be mounted adjacent to the PL lamp. Please contact Thomas And Betts Support Centre on 1300 666 595 if you require more information. Specific PL lamp Power Packs are supplied without an LDR and are programmed as non-maintained.

NEXUS LX (DATA CABLE SYSTEM)

The Nexus range light fittings are designed to be connect into a special communication network, using Level 4 single twisted pair data cable. Before attempting to create or modify Nexus network, please ensure that you are familiar with the special requirements of these networks. Also ensure that you have prior permission from the building owner or manager. The Nexus LX User & Technical Guide describes all you need to know to successfully install Nexus project. Please ensure you have read the guide before continuing. Copies of the guide are available free of charge from any product supplier.

INSTALLATION INSTRUCTIONS

To install Nexus Power Packs, follow these steps:

1. Remove the Power Pack from the packing box and inspect it for damage or imperfections. If any damage is found, do not install, replace it carefully into the packing box and notify the Thomas & Betts Product Support Hotline in Australia on 1300 666 595.

2. If all looks okay proceed with the installation, use a pencil to mark the position of the mounting screw holes for the inverter and the battery pack in the gear tray. Figure 1 describes the inverter pack dimensions.

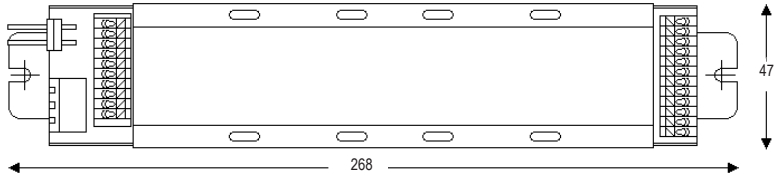

Figure 1: Nexus Inverter Pack Dimensions: Length 268mm, Width 47mm, Height 41mm

3. Fit the inverter and battery pack using suitably sized screws and nuts. Make sure that the battery pack is mounted as far as possible from the ballast or from any other components that may get hot.

WIRING CONNECTIONS

Following below are the wiring connections to wire Power Pack as maintained, non-maintained and sustained. When wiring Power Pack to a sustained fitting, the fitting must be programmed as sustained using utility tools. Ensure that the stripped wire ends are completely inserted into the terminal block and no bare conductors are exposed to the metal.

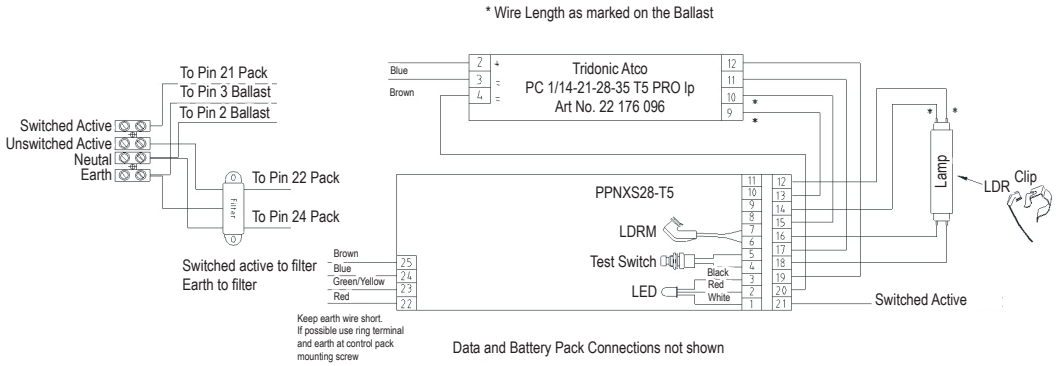

Figure 2: Wiring Diagram Nexus Power Pack using conventional electronic ballast

Note: Wiring connections are different if using other electronic ballast. Wiring diagrams are available from Thomas & Betts Website http://www.tnb.ca/aus/resources/wiring diagram-2/.

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FILTER CONNECTIONS

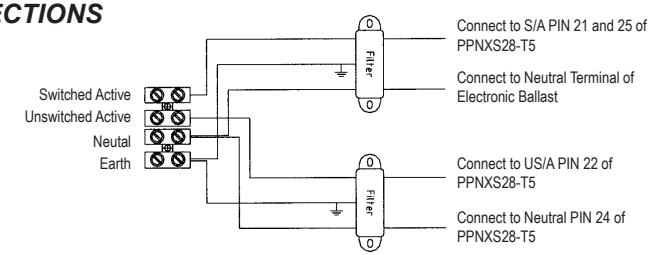

Figure 3: Filter Connections to be used with Nexus T5 product where applicable

DATA CONNECTIONS

Data cable connects via the 3-way strain relief plug (supplied with the Power Pack) to the data terminal as shown in Figure 2.

Note: When correctly installed no fitting should have more than two data cables connected to it. If you have more than two data cables at any one fitting, the installation is incorrect. You will need to consult the Nexus LX User & Technical Guide.

Warning: No mains carrying cables are to be connected to the data terminals or cables.

4. Light sensing clip (LDR) monitors mains on/off lamp condition and is to be affixed on the mains lamp/tube refer Figure 2. Please note the light sensing clip (LDR) is not supplied for PL lamp Power Packs and the PL lamp power packs are programmed as non-maintained. (Refer PL lamp warning on page 1)

5. Lamp operation:
   Maintained: Once powered up, in a maintained fitting the normal AC lamp (if present) should lights up and stays on until the power supply fails. The emergency function of the unit should only operate when the unswitched active power supply fails or when somebody presses the manual test button located on the fitting. The emergency function also operates when the fitting receives a command from the Nexus controller to switch into emergency mode.
   Non-maintained: Once powered up, in a non-maintained fitting the present lamp stays off. The emergency function of the unit should only operate when the unswitched active power supply fails or when somebody presses the manual test button located on the fitting. The emergency function also operates when the fitting receives a command from the Nexus controller to switch into emergency mode.

6. When you first install the new Nexus Power Pack its LED will be flashing green. During different modes of operation the LED status should be as following:

Flashing orange	Wink mode cable tracing is on. Valid messages are being received by the unit.
Static orange	Wink mode cable tracing has been turned off.
Static red	Unit has been commissioned and battery is charging.
Flashing red	Unit is under test.

   Refer to the Nexus LX User & Technical Guide for detailed description of all possible LED states and their meanings.

7. Check the operation of the fitting to ensure that the installation was successful. When powered up, allow a few minutes to give the battery a small charge, then press the manual test button located on the fitting. Press and hold the test button for a few seconds and observe that the emergency lamp lights up and stays on, until the test switch is released. If the lamp works only momentarily, this ensures that the connections are correct and the battery requires at least 16 hours to fully charge. If the lamp doesn't work at all, check the supply, the connections and the trouble shooting guide at the end of this document.

8. Once manually checked as per item 7 above, the fitting is ready to be communication tested and commissioned into the Nexus network. Keep the information details of this fitting including exact location description, DB (distribution board) and CB (circuit breaker) numbering, channel and router numbering, plan number and cross referencing information as all this will be required for entry into the database during commissioning. Refer to the Nexus LX User & Technical Guide for full details. As the installer, it is your responsibility to conduct the initial discharge testing of the installed fitting. Refer to AS/NZS2293.

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